

REMARKS

Claims 1-22 are pending. Claims 1 has been amended, and claim 23 has been cancelled by this amendment. No new matter has been added.

Claims 1-3, 5-8 and 23 stand rejected under 35 USC 103(a) as being unpatentable over Ohkubo, U.S. Patent 5,832,018, in view of Serreze, U.S. Patent 5,222,090. This rejection is respectfully traversed.

Ohkubo discloses a 7 nm-thick InGaAs well layer 16 (col. 3, lines 37-38). Although Ohkubo is silent with regard to this layer's wavelength, this well layer is typically used in 980 nm LDs. In fact, a combination of the 7 nm-thick InGaAs well layer and barrier layers of InGaAsP, InGaP, or GaAsP cannot realize a 760-800 nm LD as recited in claim 1. Thus, modifying Ohkubo in view of Serreze, as suggested by the Examiner, would not result in the device recited in claim 1.

The structure of the barrier/guide/cladding layers is a very important factor to obtain a desired laser emission wavelength because the values of ΔE_c and ΔE_v depend on the emission wavelength. In order to obtain an emission wavelength of 760-800 nm, the present invention of claim 1 as amended requires that the well layer be made of InGaAsP, *not InGaAs as taught by Ohkubo*, and that InGaAsP or GaAsP barrier layers and an upper and/or an lower $Al_zGa_{1-z}As$ ($0.20 < z \leq 1$) guide layer be used in association with the InGaAsP well layer.

The semiconductor laser device with an emission wavelength of between 760 and 800 nm according to the present invention is characterized in the claimed combination of the compositions of the InGaAsP well layer(s), InGaAsP or GaAsP barrier layers, and $Al_zGa_{1-z}As$ ($0.22 < z \leq 1$) upper/lower guide layer. Such a combination of the compositions for the well layer(s), barrier layers, and the guide layer(s) is not taught or suggested by Ohkubo even in combination with Serreze in which the confinement layers made of $(Al_{0.2}Ga_{0.8})_{0.5}In_{0.5}P$ or $Ga_{0.5}In_{0.5}P$ serve as barrier and guide layers.

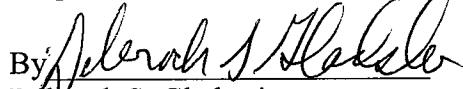
The remaining claims are allowable at least due to their respective dependencies.
Applicants request that this rejection be withdrawn.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 204552028900.

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Respectfully submitted,

By: 
Deborah S. Gladstein

Registration No.: 43,636
MORRISON & FOERSTER LLP
1650 Tysons Blvd, Suite 400
McLean, Virginia 22102
(703) 760-7753